राष्ट्रीय शैक्षणिक धोरण-२०२० च्या राज्यातील अंमलबजावणीच्या अनुषंगाने अभियांत्रिकी पदवी अभ्यासक्रम आराखडा, श्रेयांक आराखडा याबाबत मार्गदर्शक सूचना...

महाराष्ट्र शासन

उच्च व तंत्र शिक्षण विभाग

शासन निर्णय क्रमांक : एनईपी-२०२२/ (६७/२३) /तांशि-२

मंत्रालय, मुंबई -४०० ०३२

दिनांक : ४ जुलै, २०२३

संदर्भ : १) शासन निर्णय, उच्च व तंत्र शिक्षण विभाग, क्रमांक -एनईपी-२०२२/प्र.क्र.१०५/विशि-३, दि.६/१२/२०२२

२) शासन निर्णय, उच्च व तंत्र शिक्षण विभाग, क्रमांक-एनईपी-२०२२/प्र.क्र.०९/विशि-३/शिकाना, दि.२६/१२/२०२३

३) शासन निर्णय, उच्च व तंत्र शिक्षण विभाग, क्रमांक-एनईपी-२०२२/प्र.क्र.०९/विशि-३/शिकाना, दि.२०/४/२०२३

४) तंत्र शिक्षण संचालनालयाचे पत्र क्र. १७/तंशिसं/राशैधो/२०२३/१६८,दि. २८ जून, २०२३

प्रस्तावना :

भारताला ज्ञान महासत्ता बनविण्यासाठी, विद्यार्थ्यांमध्ये आवश्यक कौशल्य व ज्ञानप्राप्ती आणि विज्ञान, तंत्रज्ञान, शिक्षण आणि औद्योगिक क्षेत्रामधील मनुष्यबळाची कमतरता दूर करण्यासाठी, भारतातील लोकसंख्येला गुणवत्तापूर्ण शिक्षण, नाविन्यपूर्ण शिक्षण व संशोधनाच्या सुविधा उपलब्ध करुन देण्यासाठी भारत सरकारने नवीन राष्ट्रीय शैक्षणिक धोरण-२०२० लागू केलेले आहे. नवीन शैक्षणिक धोरणामध्ये सर्वांगीण आणि बहुविद्याशाखीय शिक्षण प्रणालीचा अंतर्भाव करण्यात आला असून, ज्याचा उद्देश मानवाच्या सर्व क्षमतांचा नैतिक-एकात्मिक पध्दतीने विकास करणे आहे.

याअनुषंगाने शासनाच्या संदर्भाधीन दि. ६ डिसेंबर २०२२ रोजीच्या शासन निर्णयाद्वारे राष्ट्रीय शैक्षणिक धोरण-२०२० ची सन २०२३-२४ पासून प्रभावी व एकसमान अंमलबजावणी करण्याच्या दृष्टीने सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समुह विद्यापीठे आणि सर्व शैक्षणिक संस्थांसाठी निर्देश जारी केलेले आहेत. तसेच टास्क फोर्सच्या अहवालातील शिफारशींच्या अंमलबजावणी संदर्भात आढावा घेऊन, अंमलबजावणी करताना उद्भवणाऱ्या समस्यांचे निराकरण करण्यासाठी शासनाच्या संदर्भाधीन दिनांक २६ डिसेंबर, २०२२ च्या आदेशान्वये डॉ. नितीन करमळकर यांच्या अध्यक्षतेखाली सुकाणू समितीची स्थापना करण्यात आलेली आहे. तसेच दि. २० एप्रिल २०२३ रोजीच्या शासन निर्णयाद्वारे राज्यामध्ये राष्ट्रीय शैक्षणिक धोरण २०२० च्या अंमलबजावणीच्या अनुषंगाने गठीत केलेल्या सुकाणू समीतीच्या शिफारशीनुसार अभ्यासक्रम व श्रेयांक आराखड्याची राज्यामध्ये एकसमान प्रमाणात अंमलबजावणी होण्यासाठी पहिल्या टप्प्यात कला, वाणिज्य व विज्ञान शाखेतील पदवी व पदव्युत्तर अभ्यासक्रमांसाठी (AICTE, PCI, BCI, CoA, NCTE इ. सारख्या नियामक संस्थांची मान्यता आवश्यक असलेले अभ्यासक्रम वगळून) सुधारित मार्गदर्शक सूचना निर्गमित केलेल्या आहेत.

उपरोक्त निर्णयाच्या अनुषंगाने दिनांक २३ जून, २०२३ रोजी मा. मंत्री उच्च व तंत्र शिक्षण यांच्या अध्यक्षतेखाली स्वायत्त अभियांत्रिकी महाविद्यालयांकरीता आयोजित करण्यात आलेल्या चर्चासत्रामध्ये

साधक बाधक चर्चा होऊन अभियांत्रिकी स्वायत्त संस्थांमधील अभ्यासक्रम व श्रेयांक आराखड्याची राज्यामध्ये एकसमान प्रमाणात अंमलबजावणी होण्यासाठी सर्व (अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थ सहाय्यित विद्यापीठे व समुह विद्यापीठे आणि सर्व शैक्षणिक संस्था यामधील) अभियांत्रिकी पदवी अभ्यासक्रमासाठी सूचना व निर्देश जारी करण्याबाबतचा प्रस्ताव शासनाच्या विचाराधिन होता.

शासन निर्णय :

शैक्षणिक वर्ष २०२३-२४ पासून पहिल्या टप्प्यात अभियांत्रिकी अभ्यासक्रमाच्या स्वायत्त संस्थांमधील (Autonomous Institutes) पदवी अभ्यासक्रमांसाठी या शासन निर्णयासोबत जोडलेल्या परिशिष्टानुसार, अभ्यासक्रम व श्रेयांक आराखड्या संदर्भात निर्देश जारी करण्यांत येत असून, सदर निर्देशांची अंमलबजावणी शैक्षणिक वर्ष २०२३-२४ पासून करण्यात यावी. तसेच सर्व अकृषि विद्यापीठांनी त्यांच्या अंतर्गत येणाऱ्या सर्व अभियांत्रिकी महाविद्यालयातील पदवी अभ्यासक्रमासाठी या धोरणाची अंमलबजावणी शैक्षणिक वर्ष २०२४-२५ पासून करण्यात यावी.

सदर निर्देश महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम-२०१६ मधील कलम ५(८१) मधील तरतूदीनुसार निर्गमित करण्यात येत आहेत.

सदर निर्देशाच्या अमलबजावणीबाबतचा आढावा शासनामार्फत सुकाणू समितीच्या माध्यमातून वेळोवेळी घेण्यात येईल.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थाळावर उपलब्ध करण्यात आला असून, त्याचा संकेतांक २०२३०७०४१७४९१९०४०८ असा आहे. हा शासन निर्णय डिजीटल स्वाक्षरीने साक्षांकित करुन काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

SATISH JAGDERAO TIDKE

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(सतीश तिडके)
उपसचिव, महाराष्ट्र शासन

प्रत :

१) मा. राज्यपाल यांचे प्रधान सचिव, राजभवन, मुंबई
२) मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई
३) मा. उपमुख्यमंत्री यांचे उप सचिव, मंत्रालय, मुंबई
४) मा. मंत्री, उच्च व तंत्र शिक्षण विभाग यांचे खाजगी सचिव, मंत्रालय, मुंबई
५) मा. कुलगुरु, सर्व अकृषि विद्यापीठे, अभिमत चिद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे, व समुह विद्यापीठे
६) कुलसचिव, सर्व अकृषि विद्यापीठे, अभिमत चिद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे, व समुह विद्यापीठे
७) संचालक, उच्च शिक्षण / तंत्र शिक्षण / कला / ग्रंथालय
८) अध्यक्ष, एनईपी सुकाणू समिती
९) सदस्य सचिव, एनईपी सुकाणू समिती
१०) प्रधान सचिव, उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई
११) उपसचिव (तांशि), उच्च व तंत्र शिक्षण विभाग यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई
१२) निवडनस्ती (तांशि-२)

शासन निर्णय क्रमांक : एनईपी-२०२२/(६७/२३) /तांशि-२, दिनांक : ४ जुलै, २०२३
सोबतचे परिशिष्ट

DIRECTIVES (निर्देश)

1. Implementation of Four Year UG Engineering Curriculum in First Phase with effect from Academic Year 2023-24:

The Credit and Multidisciplinary Curricular Framework, designed on the lines of the National Credit Framework and AICTE Approval Process Handbook, is to be made applicable in first phase to the AICTE-regulated UG (B.E./B.Tech. or equivalent) Engineering/ Technology Programs conducted **in Autonomous Engineering Colleges and State University Campuses in Maharashtra** with effect from Academic Year 2023-24.

2. Credit Framework under Four-Years UG Engineering Programme with Multiple Entry and Multiple Exit options:

The Four-year Bachelor's Multidisciplinary Engineering Degree Programme allows the students to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per their choices and the feasibility of exploring learning in different institutions. The minimum and maximum credit structure for different levels under the Four-year Bachelor's Multidisciplinary Engineering UG Programme with multiple entry and multiple exit options are as given below**:**

Credit Framework

Levels	**Qualification Title**	**Credit Requirements**		**Semester**	**Year**
		Minimum	**Maximum**		
4.5	One Year UG Certificate in Engg./ Tech.	40	44	2	1
5.0	Two Years UG Diploma in Engg./ Tech.	80	88	4	2
5.5	Three Years Bachelor's Degree in Vocation (B. Voc.) or B. Sc. (Engg./ Tech.)	120	132	6	3
	4-Years Bachelor's degree				

Levels	Qualification Title	Credit Requirements		Semester	Year
		Minimum	Maximum		
6.0	(B.E./ B.Tech. or Equivalent) in Engg./ Tech. with Multidisciplinary Minor	160	176	8	4
6.0	4-Years Bachelor's degree (B.E./ B.Tech. or Equivalent) in Engg./ Tech.- Honors and Multidisciplinary Minor	180	194	8	4
6.0	4-Years Bachelor's degree (B.E./ B.Tech. or Equivalent) in Engg./ Tech.- Honors with Research and Multidisciplinary Minor	180	194	8	4
6.0	4-Years Bachelor's degree (B.E./ B.Tech. or Equivalent) in Engg./ Tech.- Major Engg. Discipline with Double Minors (Multidisciplinary and Specialization Minors)	180	194	8	4

(a) Credits offered per Semester will be a Minimum 20 and a Maximum 22. While minimum credits are mandatory as per National Credit Framework, the Universities and Autonomous Engineering Colleges can evolve the mechanism for providing Semester/ Level wise credit attainment flexibility within the broad framework.

(b) With effect from Academic Year 2023-24, the first year of 4-Years Multidisciplinary Bachelor's Degree in Engg./ Tech. Program (B.E./ B.Tech. or

Equivalent) will be introduced. Thus, the Fourth Year of Bachelor's Engg./ Tech. Degree (Level 6.0) with various options- Bachelor's Engg./ Tech. Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (160-176 credits), OR Bachelor's Engg./ Tech. Honours Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (180-194 credits) OR Bachelor's Engg./ Tech. Honours with Research Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (180-194 credits) OR Bachelor's Engg./ Tech. Degree in chosen Major Engg./ Tech. Discipline with Double Minor (Multidisciplinary and Specialisation Minor, 180-194 credits) will begin with effect from Academic Year 2026-27.

(c) Under Bachelor's Engg./ Tech. Honours with Research Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (180-194 credits), the students will work on a research project or dissertation for 18 credits in the fourth year in the respective Major Engg./ Tech. Discipline. The decision regarding the distribution of 18 credits for Research Project in Semesters VII and VIII of the Fourth Year will be taken by Academic Authorities of University/ Autonomous Engineering Colleges. These 18 Credits will be over and above the min.160-max.176 Credits prescribed for Four Year Multidisciplinary Bachelor's Degree in Engg./ Tech. Program.

(d) The Bachelor's Engg./ Tech. Honours Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (180-194 credits) enables students to take up five-six additional courses in the same Engg./ Tech. discipline of 18 to 20 credits distributed over semesters III to VIII. The decision regarding the mechanism of distribution of these 18-20 credits over semesters III to VIII, which are over and above the min.160-max.176 Credits prescribed for Four Year Multidisciplinary Bachelor's Degree in Engg./ Tech., will be taken by Academic Authorities of University/ Autonomous Engineering Colleges.

(e) Under Bachelor's Engg./ Tech. Degree in chosen Major Engg./ Tech. Discipline with Double Minor (Multidisciplinary and Specialisation Minor, 180-194 credits), students would take up five-six additional courses of 18 to 20 credits in another Engg./ Tech. discipline/ Emerging Areas Specialization distributed over semesters III to VIII. The decision regarding the mechanism of distribution of these 18-20 credits over semesters III to VIII, which are over and above the min.160-max.176 Credits prescribed for Four Year Multidisciplinary Bachelor's Degree in Engg./

Tech., will be taken by Academic Authorities of University/ Autonomous Engineering Colleges.

(f) The NEP 2020 Four Year Multidisciplinary Engineering Curriculum Framework offers:

i. The flexibility to move from one discipline of study to another.

ii. The opportunity for learners to choose the courses of their interest in all disciplines.

iii. The multiple entry and exit options with the award of UG certificate/ UG diploma/ or three-year degree depending upon the number of credits secured.

iv. The flexibility for learners to move from one institution to another to enable them to have multi and/or interdisciplinary learning.

v. Mandatory One Semester Internship/ On Job Training (OJT).

vi. Provision of Vocational and Skill Enhancement Courses (VSEC), Indian Knowledge System (IKS), Community Engagement Project (CEP)/Field Project (FP) in Major Discipline Degree.

vii. Horizontal and Vertical mobility with multiple entry and exit options at each Level.

viii. Provision of NSQF compliant Skill-based Courses and internships for Exits at different Levels.

ix. Credits for Co-curricular and Extra-Curricular Activities as Curricular activities besides provision of credits for the Ability Enhancement Courses (AEC) and Value Education Courses (VEC).

x. Interdisciplinary or Multidisciplinary education through Single and Double Minors and Open Electives (OE).

xi. The flexibility to switch to alternative modes of learning (offline, ODL, and Online learning, and hybrid modes of learning).

3. Distribution of Credits across Four Years Engg./Tech. Degree Programmes:

In general, for the four years' bachelor's degree programme, the distribution of credits will be as follows:

(a) Major (Core) Subject comprising Mandatory and Elective Courses:

i. Minimum 50% of total credits corresponding to Three/Four - year UG Degree- Mandatory Courses offered in all Four years;
ii. Elective courses of Major will be offered in the third and/or final year.
iii. Vocational Skill Courses, Internship/ Apprenticeship, Community Engagement Project (CEP)/ Field Projects (FP), Research Projects connected to Major

(b) Compulsory Multidisciplinary Minor Subject: 14 Credits

i. The Minor subjects may be from the different disciplines of the Engineering faculty, or they can be from different faculty altogether.
ii. The credits of compulsory Minor subjects shall be completed from the second year to the final year of UG Programme.

(c) Generic/ Open Elective Courses (OE): 08 credits

i. It is to be offered in Second and/or Third year
ii. Faculty-wise baskets of OE shall be prepared by University/ Autonomous Engineering Colleges.
iii. OE is to be chosen compulsorily from faculty other than that of the Major Discipline.

(d) Vocational and Skill Enhancement Courses (VSEC): 08 credits

- <u>Vocational Skill Courses (VSC)</u>: 04 credits, including Hands on Training corresponding to the Major and/or Minor Subject:

i. To be offered in first three years;
ii. Wherever applicable vocational courses will include skills based on advanced laboratory practicals of Major.

- <u>Skill Enhancement Courses (SEC) : 04 credits</u>

i. To be offered in first three years;
ii. To be selected from the basket of Skill Courses approved by University/ Autonomous Engineering Colleges

(e) Ability Enhancement Courses (AEC), Indian Knowledge System (IKS) and Value Education Courses (VEC): 10 Credits

- <u>AEC: 04 credits</u>

i. To be offered in First and Second year
ii. English: 02 Credits

iii. Modern Indian Language: 02 credits

iv. To be offered from the Basket approved by University / Autonomous College;

The focus for both languages should be on linguistic and communication skills.

- IKS: 02 Credits

i. To be offered in First Year

ii. Courses on IKS to be selected from the basket of IKS courses approved by

iii. University/ Autonomous Colleges or as per UGC Guidelines on IKS.

- VEC: 04 Credits

i. To be offered in Second year

ii. Value Education Courses (VEC) such as Understanding India, Environmental Science/Education, and Digital and Technological Solutions.

(f) Field Projects/ Internship/ Apprenticeship/ Community Engagement Projects corresponding to the Major (Core) Subject, Co-curricular Courses (CC).

- Internship/Apprenticeship corresponding to the Major (Core) Subject: 12 Credits. Internship of One Semester duration shall be offered either in the VII or VIII semesters. Courses offered during the Internship Semester shall be offered in online mode.

- Field Projects/Community Engagement Projects corresponding to the Major (Core) Subject: minimum 02 credits
    - To be offered in Second year of UG Degree Programmes.
- Co-curricular Courses (CC) such as Health and Wellness, Yoga education sports, and fitness, Cultural Activities, NSS/NCC and Fine/ Applied/ Visual/ Performing Arts: 04 credits
    - To be offered in First year

(g) Additional Credits for Bachelor's Degree- with Double Minor OR Honours: 18-20 Credits

- These are additional credits to be offered from the second year to the final year and will be offered as an option to students.

(h) Additional Credits for Bachelor's Degree- Honours with Research: Minimum 18 Credits

- These are additional credits to be offered in the final year and will be offered as an option to students.

The UGC Regulations, 2021 permit up to 40% of the total courses being offered in a particular programme in a semester through the **Online Learning Courses** offered through the **SWAYAM** platform and/or other State Level Common Platforms which can be developed in due course with the participation of different Universities/ HTEIs.

Illustrative Semester wise Credit distribution structure for Four Year UG Engineering Program - One Major, One Minor

Semester		**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**Total Credits**
Basic Science Course	BSC/ESC	06-08	08-10		--	--	--	--	--	14-18
Engineering Science Course		10-08	06-04		--	--	--	--	--	16-12
Programme Core Course (PCC)	Program Courses	--	02	08-10	08-10	10-12	08-10	04-06	04-06	44-56
Programme Elective Course (PEC)		--	--	--	--	04	08	02	06	20
Multidisciplinary Minor (MD M)	Multidisciplinary Courses		-	02	02	04	02	02	02	14
Open Elective (OE) Other than a particular program		--	--	04	02	02	--	--	--	08
Vocational and Skill Enhancement Course (VSEC)	Skill Courses	02	02	--	02	--	02	--	--	08
Ability Enhancement Course (AEC -01, AEC-02)	Humanities Social Science and Management (HSSM)	02	--	--	02	--	--	--	--	04
Entrepreneurship/Economics/ Management Courses		--		02	02	--	--	--	--	04
Indian Knowledge System (IKS)			02		--	--	--	--	--	02
Value Education Course (VEC)		--	--	02	02	--	--	--	--	04
Research Methodology	Experiential Learning Courses	--	--	--	--	--	--		04	04
Comm. Engg. Project (CEP)/Field Project (FP)		--	--	02	--	--	--	-	-	02
Project		--	--	--	--	--	--		04	04
Internship/ OJT		--	---			--	--	12	-	12
Co-curricular Courses (CC)	Liberal Learning Courses	02	02		--	--	--	--	-	04
Total Credits (Major)		**20-22**	**20-22**	**20-22**	**20-22**	**20-22**	**20-22**	**20-22**	**20-22**	**160-176**

Abbreviations: Generic/ Open Electives: OE; Vocational Skill and Skill Enhancement Courses: VSEC; Vocational Skill Courses: VSC; Skill Enhancement Courses: SEC; Ability Enhancement Courses: AEC; Indian Knowledge System: IKS; Value Education Courses: VEC; OJT: On Job Training: Internship/ Apprenticeship;

Field projects: FP; Community engagement project: CEP; Co-curricular Courses: CC; RM: Research Methodology; Research Project: RP, Liberal Learning Course: Lib. Learn, Courses on Humanities, Social Science, and Management: HSSM

Note: The Credit Distribution Table given above is illustrative only. The Universities/ Autonomous Colleges may suitably modify within the broader framework of credit distribution across seven verticals and as per the AICTE rules and regulation.

4. Choice of Major and Minor Subjects/ Discipline

(a) Major (Core) Subject

Major (Core) Subject is the Engineering/ Technology discipline or subject of main focus and the degree will be awarded in that discipline/ Subject. Students should secure a minimum 50% of total credits through Core Courses (mandatory courses, electives, vocational courses, Internship/ Field Projects/ Apprenticeship/ Community Engagement Projects, Seminars, and Group Discussions). In addition, for the award of Bachelor's Degree- with Double Minor OR Honours students shall have to earn additional 18-20 credits by opting for courses of Emerging Specialisations or the Same Discipline, respectively. For the award of Bachelor's Degree- Honours with Research, students shall have to earn additional 18-20 credits through Research Project or Dissertation.

In addition, from the perspective of promoting Multidisciplinary and Interdisciplinary Thinking, the Academic of Autonomous Engineering Colleges and Universities can exercise the design of Major Subjects on the lines of Multidisciplinary or School, Interdisciplinary, Double Major besides Department Specific Major Subjects such as Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering etc Refer Prof R D Kulkarni Committee Report- Chapter II, section 2.2, P. No. 20-23 for further details on design of different categories of Major/ Core Subjects.

(b) Students shall select a 'Major (Core) Subject' and a 'Minor Subject' from the lists of various Subject Combinations and Options provided by the State Universities/ Autonomous Colleges.

5. Courses on Indian Knowledge System (IKS)

The concerned academic authorities, while defining the curriculum for modules/ courses on IKS, may take the support of the Indian Knowledge System (IKS)

Cell under the Ministry of Education (MoE) at AICTE, New Delhi which is established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. The IKS Cell has established multiple IKS Centers at different Institutes in various parts of the country to act as a catalyst for initiating research, education, and outreach activities. In addition, the list of courses may be developed and offered in online or offline mode by the parent university or the specialized HEIs.

The courses to be developed under the Indian Knowledge Systems (IKS) are as follows:

I. Generic IKS Course: These are expected to contain basic knowledge of the IKS subject. It should contain introductory information to the IKS. The student should be able to acquire basic knowledge after completion of the course.

II. Subject-Specific IKS Courses: These courses should contain advanced information pertaining to the subject as these will be considered as a part of the major credit. The student should have completed the Generic level as a prerequisite before enrolling in the discipline-related course.

The Autonomous Institutes/ Universities may evolve their own IKS subject-related courses by following UGC guidelines in this regard.

6. Credit Specifications

i. Theory Courses: 13-15 hours of teaching per credit is required in a semester.

ii. Laboratory Course: 26-30 hours in laboratory activities per credit is required in a semester.

iii. Studio activities: Studio activities involve the engagement of students in creative or artistic activities. Every student is engaged in performing a creative activity to obtain a specific outcome. Studio-based activities involve visual- or aesthetic-focused experiential work. A minimum of 26-30 hours in studio activities per credit in a semester is required.

iv. Workshop-based activities: Courses involving workshop-based activities require the engagement of students in hands-on activities related to work/vocation or professional practice. Every student is engaged in performing a skill-based activity. Related to specific learning outcome(s). 26-30 hours of workshop-based activities per credit in a semester is required.

v. Seminar/ Group Discussion: 13-15 hours of participation in seminar/ Group Discussion activity per credit in a semester is required.

vi. Internship: Credits for internship shall be one credit per two weeks of

internship (or 36-40 hours of engagement), The internship shall be monitored jointly by the faculty and Industry/ Organisation Mentor. Internship of One Semester duration shall be offered either in the VII or VIII semesters. Courses offered during the Internship Semester shall be offered in online mode.

vii. Field-based Learning/ Practices: These are the courses requiring students to participate in field-based learning/projects generally under the supervision of faculty. A minimum of 26-30 hours of learning activities per credit in a semester is required.

viii. Community Engagement Projects: These are the courses requiring students to participate in field-based learning/projects generally under the supervision of faculty. The curricular component of 'community engagement and service' will involve activities that would expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. 26-30 hours of contact time per credit in a semester along with 13-15 hours of activities such as preparation for community engagement and service, preparation of reports, etc., and independent reading and study with 2 credit course.

7. ABC, Admission System, Multiple Entry and Exit Path and Lateral Entry:

(a) Enrolment of Students and Registration of Colleges on ABC

All State Universities/ Autonomous Institutes must promote registering on ABC. Since Credits awarded to a student for one programmes from an institution may be transferred/redeemed by another institution upon the student's consent through ABC, it is essential that all students should get enrolled on ABC, create ABC ID, and share these ABC IDs with Academic Institutions where they are enrolled. Credits Earned by the student will reflect in the student's ABC account.

Multi-institutional learning permission: The student shall be allowed to earn some credits from institutions/colleges other than the Main/ Parent College i.e. a college where students earn all their major credits (more than 50%) including credits for the core subject. Students enrolled in the degree programmes may avail of other elective credits from two different

colleges affiliated with the same University and/or online courses available within the 40% cap mentioned by UGC.

(b) Multiple Exits: Students will have the flexibility to enter a programme in odd semesters and exit a programme after the successful completion of even semesters as per their future career needs.

- Students exiting the First Year programme after securing minimum 40 credits will be awarded UG Certificate in the relevant Discipline /Subject provided they secure 8 credits in work-based vocational courses or internship / Apprenticeship offered during summer vacation in addition to 4 credits from skill-based courses earned during the first and second semester.
- Students exiting the Second Year Programme after securing minimum 80 credits will be awarded UG Diploma in the relevant Discipline /Subject provided they secure additional 8 credits in skill-based vocational courses (skill-based courses, internship, mini projects etc) offered during summer vacation after the second year.
- Students exiting the 3-year UG program will be awarded B.Voc. in the relevant Discipline /Subject upon securing minimum 120 credits with additional 8 credits in skill-based vocational courses (skill-based courses, internship, mini projects etc.) offered during summer vacation after the sixth semester.
- Exit options shall be provided with Certification, Diploma and B. Vocational degrees to the students at the end of the second, fourth and sixth semester, respectively, in the four-year degree programme. Students will receive a Bachelor's degree with the single minor on successfully completing all eight semesters of the UG Programmes either at a stretch or with opted exits and re-entries. In addition to this, student will receive a Bachelor's degree with Double Minor/Honours/ Research subject to earning additional 18 credits.

(c) Re-entry or Lateral Entry: Students, opting for exits at any level, will have the option to re-enter the programme from where they had left off, in the same or in a different higher education institution within four years of exit and complete the degree programme within the stipulated maximum period of

eight years from the date of admission to first year UG. Re-entry at various levels for lateral entrants in academic programmes shall be based on the earned and valid credits as-deposited and accumulated in the Academic Bank of Credits (ABC) through Registered Higher & Technical Education Institutions (RHTEI) and proficiency test records. Lateral entry into the programme of study leading to the UG Diploma/ B. Vocational/ UG Bachelor's Degree with single minor/ UG Bachelor's Degree with Double Minor/ Honours /Research will be based on the validation of prior learning outcomes achieved and subject to availability based on intake capacity.

(d) Eligibility for admission to the UG Bachelor's Degree with Double Minor/ Honours /Research as per UGC guidelines: Minimum CGPA/CPI of 7.5 or minimum 75% after second semester for UG Bachelor's Degree with Double Minor/ Honours and Minimum CGPA/CPI of 7.5 or minimum 75% after sixth semester for UG Bachelor's Degree with Research.

8. Directives for State Universities and Autonomous Colleges

(a) Execution as per Statutory Provisions: The Maharashtra Public Universities Act 2016, Sections 32 and 33 (Academic Council), 34 and 35 (Faculty), 36 and 37 (Board of Deans), 38 and 39 (Board of Sub-campuses), 40 and 41(Board of Studies), 42 and 43 (Board of University Departments and Interdisciplinary studies), and 44 (Board of Post-Graduate Education in Colleges), describes the mechanism of curriculum development, upgradation/ revisions and reforms and the course syllabi, course structures and evaluation schemes of various courses so as to ensure that the university becomes a vibrant hub for the promotion of teaching and learning, skill development, research and development, interactions and linkages with industries, cultivation of intellectual property rights and entrepreneurship and incubation of knowledge linked industries. The Autonomous Colleges, in line with UGC Regulations 'UGC (Conferment of Autonomous Status upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) dated April 03, 2023, can develop new degree programme(s) at undergraduate and postgraduate levels with the approval of the Academic Council of the college and concerned Statutory Council(s), wherever required, provided the

nomenclature of the degree is in consonance with UGC Notification. Thus, these statutory authorities are advised accordingly for the execution of rigorous research-based specialization and opportunities for multidisciplinary work and interdisciplinary thinking through the design and implementation of curricular framework with effect from ACADEMIC YEAR 2023- 24 for the Graduate Level Education based on the recommendations given by Steering Committee and Directives issued by Higher and Technical Education Department, Government of Maharashtra.

(b) Learning Outcome Based Curriculum: To be designed in accordance with the international best practices and the current recommendations of NHEQF and National Credit Framework. Minimum learning hours will be 35 per week. The Board of Studies (BoS) and Academic Council (AC) of Universities as well as those of Autonomous Colleges shall adopt Learning Outcomes-based Approach to Curriculum Planning and Development, Teaching, Learning, and Assessment Methods and Practices based on Key Qualification Descriptors and Graduate attributes given by NHEQF. In addition, the respective BoS of Universities should initiate the development of learning materials for effective teaching and learning at different levels of the 4 years UG Curricular Programme. Accordingly, the Universities/ Autonomous Colleges should initiate the training of all faculties on the Learning Outcomes-based Approach, promote wider consultation of Industry Peers and Experts in framing the Curriculum and undertake dissemination of the same amongst all stakeholders including Students.

The Evaluation should be continuous, with more focus on students learning outcomes and as per the requirements of the course.

(c) Strengthening of Industry-Academic Linkages: Field projects/ Internship/ Apprenticeship/ Community Engagement and Service will have a huge role to play in institutionalizing the Curriculum Framework for Industry-Academia Linkage and to increase the employability of the students. Moreover, Internships/Apprenticeships have an enormous potential to combine work-based learning with theoretical knowledge of related disciplines/ subjects. In view of this, the Universities are advised to strengthen the Industry-Institute Linkages. Universities and Autonomous Colleges shall hold interactive meetings with representatives of Industry

Associations, MSME, Professional Organisations, Banks and Financial Institutions, NGOs, Sector Skill Councils etc for the facilitation of involvement of Industries in the smooth conduct of Internships/Apprenticeships programmes for all students.

(d) KRA: Besides transformation as Multidisciplinary HEI, the State Universities and their Affiliated Colleges should undertake the execution of relevant Key Result Areas (KRA) as a part of the successful implementation of NEP 2020.

(e) IDP: All Higher and Technical Education Institutions (HTEIs) will develop an Institutional Development Plan (IDP) to assess human resources requirements, in terms of faculty and administrative staff, physical infrastructural facilities, ICT-related technology requirements, Learning infrastructures such as Laboratories, Libraries, CPD requirements, Student Support related areas and Teaching infrastructure as well as the projection of growth and transformations in line with NEP. The HTEIs must be committed to the holistic development of students and faculty training and should work on the establishment of a quality learner support system, infrastructure upgradation, and end-to-end digitization.

(f) Sensitization of Stakeholders: The Universities/ Autonomous Colleges must devise, articulate and execute the rigorous plan for the sensitization of stakeholders in the immediate future on effective implementation of the new curricular framework with effect from Academic Year 2023-24.

9. Action Plan by Autonomous Colleges with Timelines

1. Establishment of NEP Implementation Cell at University (headed by PVC) and Autonomous Colleges (headed by Principal/Director): July 15, 2023
2. Adoption of NEP -2020 aligned curriculum by conducting a special Meeting of the Academic Council -July 20, 2023
3. Autonomous Colleges to decide and inform to University on the adoption of NEP 2020- July 31, 2023
4. To develop, statutorily adopt and release for implementation of faculty-wise Baskets of all 7 verticals viz. - i. Major; ii. Multidisciplinary Minor; iii. Generic/ Open Elective Courses; iv. Vocational and Skill Enhancement Courses (VSEC); v. Ability Enhancement Courses (AEC), Indian Knowledge System (IKS) and Value

Education Courses (VEC); vi. Field projects/ internship/ apprenticeship/ community engagement projects corresponding to the Major Subject, Co-curricular Courses and Project vii. Basic and Engineering Science Courses and their Combinations to be offered in Mission Mode: July 31, 2023

5. Sensitization of stakeholders on effective implementation of new curricular framework on a continuous basis till the beginning of Academic Year 2023-24
6. Submission of ATR by 31st July 2023, on the above-mentioned action points of this GR, by the Directorate of Technical Education to the Govt. of Maharashtra**.**

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